

Abstract

[00308]

The subject invention relates to the surprising discovery that toxin complex (TC) proteins, obtainable from *Xenorhabdus*, *Photorhabdus*, and *Paenibacillus*, can be used interchangeably with each other. In particularly preferred embodiments of the subject invention, the toxicity of a “stand-alone” TC protein (from *Photorhabdus*, *Xenorhabdus*, or *Paenibacillus*, for example) is enhanced by one or more TC protein “potentiators” derived from a source organism of a different genus from which the toxin was derived. As one skilled in the art will recognize with the benefit of this disclosure, this has broad implications and expands the range of utility that individual types of TC proteins will now be recognized to have. Among the most important advantages is that one skilled in the art will now be able to use a single set of potentiators to enhance the activity of a stand-alone *Xenorhabdus* protein toxin as well as a stand-alone *Photorhabdus* protein toxin. (As one skilled in the art knows, *Xenorhabdus* toxin proteins tend to be more desirable for controlling lepidopterans while *Photorhabdus* toxin proteins tend to be more desirable for controlling coleopterans.) This reduces the number of genes, and transformation events, needed to be expressed by a transgenic plant to achieve effective control of a wider spectrum of target pests. Certain preferred combinations of heterologous TC proteins are also disclosed herein. Other objects, advantages, and features of the subject invention will be apparent to one skilled in the art having the benefit of the subject disclosure.